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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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EXAMINER

BLEVINS, JERRY M

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| ART UNIT | PAPER NUMBER |
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2883

DATE MAILED: 03/21/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/507,206

Applicant(s)

MARTI SENDRA ET AL.

Examiner

Jerry Martin Blevins

Art Unit

2883

[Handwritten signature]

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 January 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 7-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 7-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 September 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

BRIAN HEALY

DETAILED ACTION

Response to Arguments

Applicants' arguments filed January 4, 2006 have been fully considered but they are not persuasive.

Applicants argue that applied prior art reference to Lowery et al., US Patent number 6,882,772, fails to disclose or suggest a different delay introduced for each wavelength, wherein the different delays are obtained by dispersion. Examiner points out that the structure of the multiple delay line taught by Lowery (see Figure 1 and corresponding text) is substantially identical to that of the present application (see Figure 1 and corresponding text), and therefore, the different delays are intrinsically obtained in similar fashions. Although Lowery teaches that the different delay introduced for each wavelength is obtained by the different lengths of the plurality of sections of the dispersive optical medium (column 6, lines 6-13), examiner points out that dispersion in the optical medium is correlated with (in fact, it is proportional to) the length of the medium itself. Therefore, different delays obtained from differing lengths of sections of the medium, would intrinsically also arise from the differing dispersions associated with the differing lengths. Examiner submits as evidence to this intrinsic property, reference to US Pre Grant Publication to Sakakibara et al., number 2005/0254760. On page 4, paragraph 68, Sakakibara teaches the proportional relation between length of a dispersive medium and the dispersion occurring in the medium. (This submission of evidence is not an introduction of a different grounds of rejection.

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Newly cited reference is merely used to justify the previous grounds of rejection by showing that the argued limitations are intrinsically taught in the previously cited reference to Lowery). In view of the above response, applicants' arguments are merely semantic in nature, and fail to overcome the prior art rejections listed in the prior Office Action.

Claim Objections

Claims 8-17 are objected to because of the following informalities:

Claims 8, 9, 12, and 15-17 depend from a canceled base claim. For purposes of examination, examiner interprets above claims to depend from claim 7.

Claims 10, 11, 13, and 14 are objected to based on their dependence on objected to base claims.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 7-11 and 15-17 are rejected under 35 U.S.C. 102(e) as being anticipated by Lowery.

Regarding claim 7, Lowery teaches a multiple delay line (Figure 1, element 12) comprising an arrayed waveguide grating (column 2, lines 25-34) comprising a plurality of input ports (4) and a plurality of output ports (8) and a plurality of sections of a dispersive optical medium (Figure 1, element 2) forming at least one feedback line in the arrayed waveguide grating (column 6, lines 6-22), wherein a different delay is introduced for each wavelength in an optical carrier according to a free spectral range of the arrayed waveguide grating, wherein the different delays of the wavelengths in the optical carrier form a delay profile of the optical carrier (column 5, lines 41-59, column 4, lines 35-42, and column 3, lines 18-34), wherein the different delays are obtained by dispersion occurring in the plurality of sections of the dispersive optical medium (column 6, lines 6-13, and see response to arguments above).

Regarding claim 8, Lowery teaches the above limitations of the base claim 7. Lowery also teaches that the plurality of sections of the dispersive optical medium comprises at least one of a section of a dispersive optical fiber, a diffraction network, and a medium that is dispersive in both transmission and reflection (column 1, lines 35-47 and column 2, lines 25-34).

Regarding claim 9, Lowery teaches the above limitations of the base claim 7. Lowery also teaches that the at least one feedback line forms loop-back configuration (column 6, lines 6-13).

Regarding claim 10, Lowery teaches the above limitations of the base claim 9. Lowery also teaches that the at least one feedback line extends between one of the input ports and a corresponding one of the output ports (column 6, lines 6-13).

Regarding claim 11, Lowery teaches the above limitations of the base claim 9. Lowery also teaches that the at least one feedback line extends between one of the input ports and a non-corresponding one of the output ports (column 6, lines 14-22).

Regarding claim 15, Lowery teaches the above limitations of the base claim 7. Lowery also teaches that the delay introduced by the multiple delay line is a multiple of the free spectral range of the arrayed waveguide grating (column 5, line 60 – column 6, line 5).

Regarding claim 16, Lowery teaches the above limitations of the base claim 7. Lowery also teaches that a different delay profile is created for each optical carrier of a plurality of optical carriers simultaneously introduced into the multiple delay line (column 5, lines 60-65).

Regarding claim 17, Lowery teaches that the at least one feedback line is formed between at least one of an input port, an output port, two different input ports, two different output ports, and an input port and an output port (column 6, lines 6-22).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

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invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 12-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lowery in view of US Patent to Lee et al., number 6,735,391.

Regarding claims 12 and 14, Lowery teaches the above limitations of the base claim 7. Lowery does not explicitly teach that the at least one feedback line forms a fold-back configuration fold-back configuration. Lee teaches a feedback line which forms a feed-back configuration (column 3, line 66 – column 4, line 3), which includes feedback lines extending between the same output port. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teaching of Lowery with the fold-back configuration of Lee. The motivation would have been to enhance WDM by allowing for bi-directional WDM (Lee, column 3, line 66 – column 4, line 3, the desirability of this taught by Lowery in column 6, lines 14-22).

Regarding claim 13, Lowery in view of Lee teaches the above limitations of the base claim 12. Lowery also teaches that the at least one feedback line extends between two different output ports (column 6, lines 14-22).

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

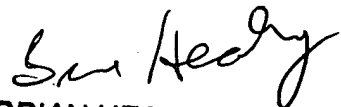
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jerry Martin Blevins whose telephone number is 571-272-8581. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank G. Font can be reached on 571-272-2415. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JMB


BRIAN HEALY
PRIMARY EXAMINER
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